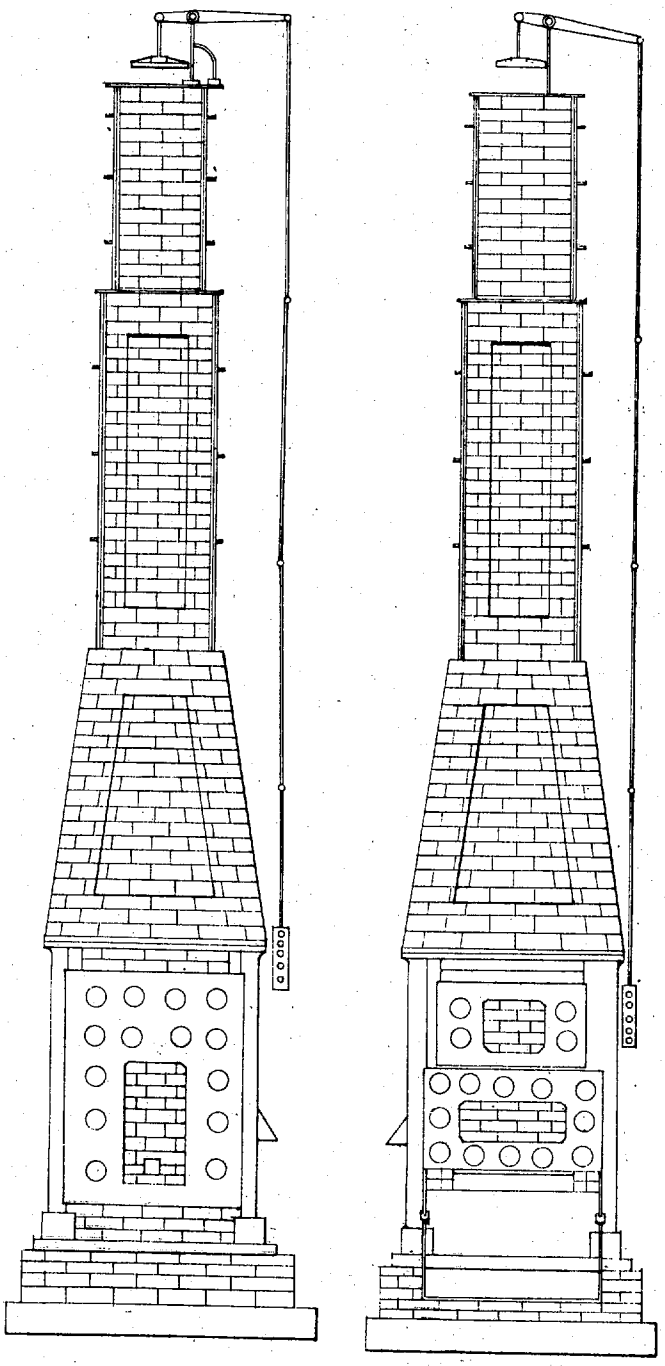
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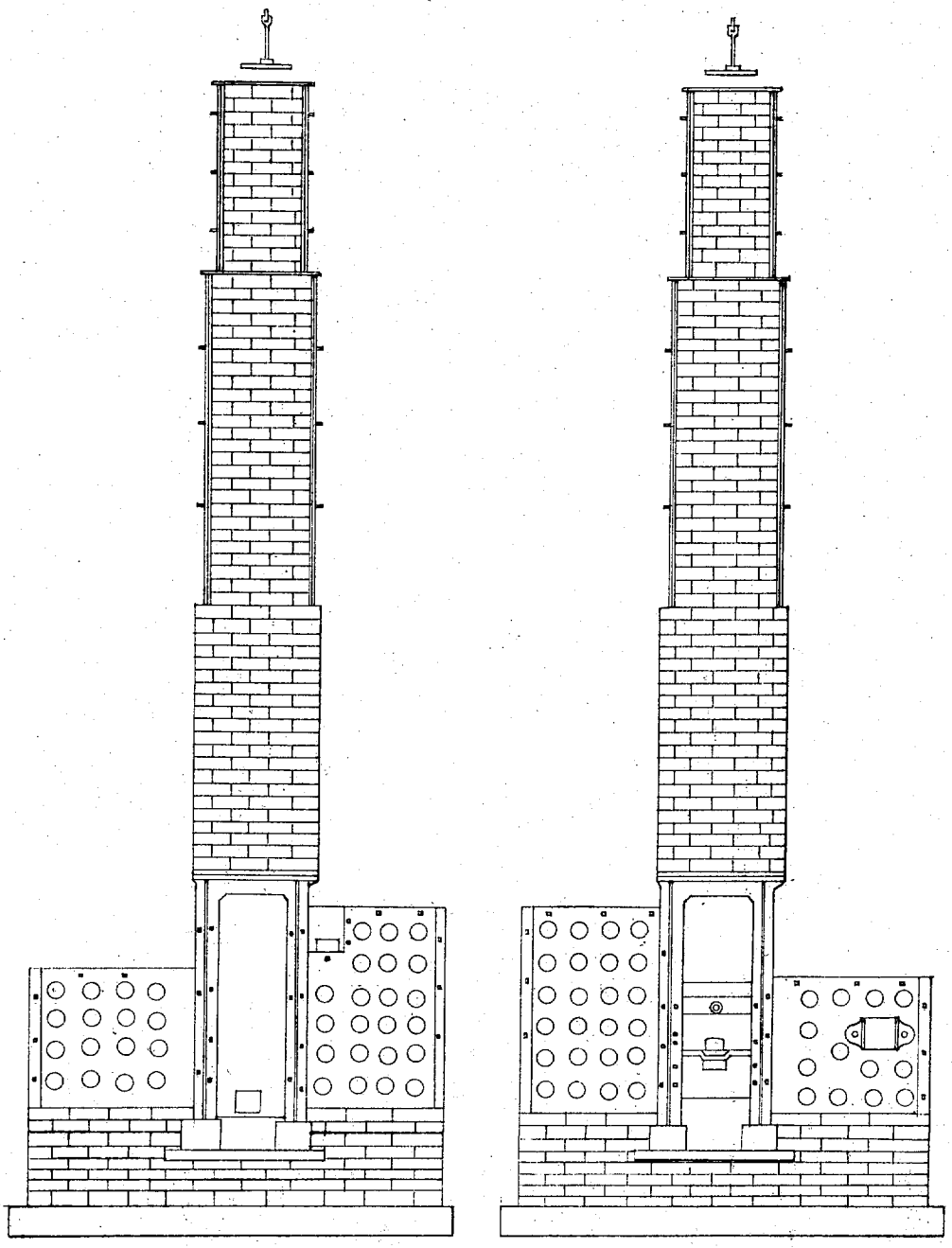
W. Jones.
Furnace
Patented Dec. 16th 1833



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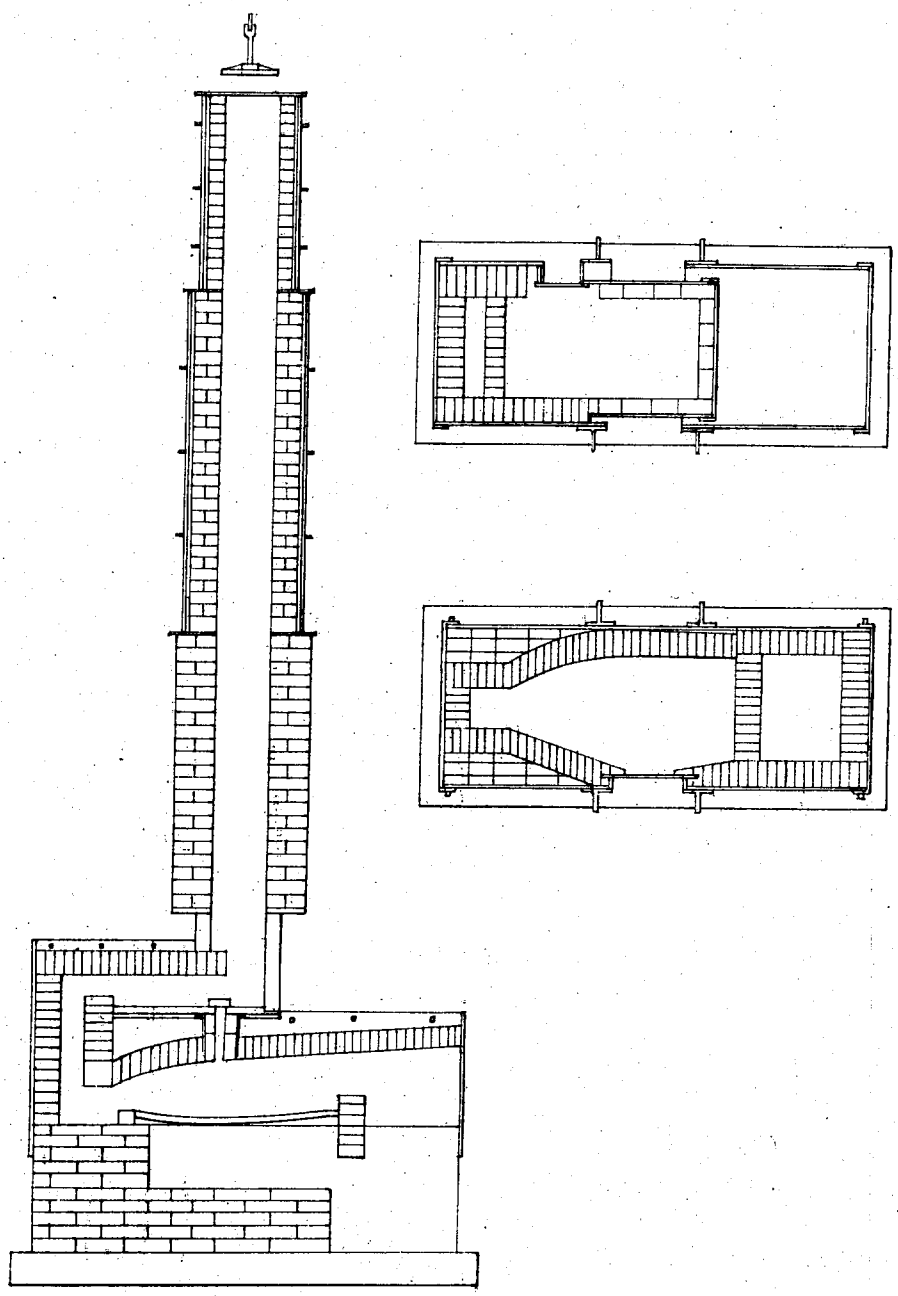
W. Jones.
Furnace
Patented Dec. 16th 1833



(3 Sheets.) Sheet 3

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W. Jones.
Furnace
Patented Dec. 16th 1833



Dec 16, 1833

William Jones. Hamshaw Rockland Co. N York

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Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said William Jones himself of his improvement in the manufacture of iron in the two processes of it called puddling and heating

To all to whom these presents shall come

Be it known that I William Jones of Hamshaw in the County of Rockland and State of New York have invented new and useful improvement in the manufacturing of iron in the two processes of it called puddling and heating and that the following is a full and exact description of the construction and operation of said improvement as invented by me

The improvement consists of a stove or heating apartment adjoining to and connected with a puddling furnace and heated with the same fire as the one by which the puddling furnace is heated. The ground plan or foundation of the furnace is a rectangular parallelogram about 14 feet long by 7 feet broad and consists of a layer of stone & bricks upon this the walls of the furnace are raised of brick work and corresponding in external form with the foundation are erected. The height of the walls on the right side is about seven feet and on the left side about 9 feet 3 ins each being well secured with iron plates or binders

The stack or chimney rises from the center of the furnace & is of the usual form. The flue being rather larger than common. The furnace internally is divided into three compartments communicating with one another viz. The stove coal or fuel apartment and the puddling apartment which are on the same level. The stove or heating apartment which is over the puddling apartment. Over the stove coal and puddling apartment

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is an arched wall of Brick extending Lengthways from the right side to within about 9 inches of the Wall on the left side this leaving a flue of that width on the left side

The height of the Roof on the right side from the floor of the stow-coal apartment is about 2 feet 4 inches and at its termination near the left side and at the mouth of the puddling apartment about 10 inches

Thro' this Roof is an aperture nearly over the centre of the puddling apartment about seven inches by four inches dimensions communicating with the heating apartment above & thro' which the iron when properly heated is dropped into the puddling apartment which is of an elliptical form with a cast iron bottom or floor — The coal and iron in the stow coal and puddling apartments are prevented from mixing by a row of bricks called the bridge of about a foot in height extending across and separating the two apartments — The flame from the stow coal or fire apartments which is on the right hand is carried horizontally across the puddling apartment to the flue on the left hand previous this it is led at pleasure to the heating apartments & thence horizontally across the heating apartment to the stack where it is finally conveyed off. The process of operation is to charge the fire or heating apartment with pig iron refined metal blooms, billets, bars or other iron cut into pieces about 6 inches in length by 3 inches diameter, which is heated into nearly a melting state and when so heated is conveyed through the aperture before mentioned into the puddling apartment & there wrought into balls without the necessity of a fresh fire being put on

Witnesses
J Woodcock Blunt. William Jones.
William Jones

(Granted December 16. 1793)

Dr in part to